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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,899

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Yasuhito Inagaki

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SONNENSCHN NATH & ROSENTHAL LLP  
P.O. BOX 061080  
WACKER DRIVE STATION, SEARS TOWER  
CHICAGO, IL 60606-1080

EXAMINER

LEE, DORIS L

ART UNIT

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1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,899	<b>Applicant(s)</b> INAGAKI, YASUHIITO	
	<b>Examiner</b> Doris L. Lee	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060914</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group III (claims 15-45) in the reply filed on August 13, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 1-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups.
3. The requirement is deemed proper and is therefore made FINAL.

### ***Claim Objections***

4. **Claim 29** objected to because of the following informalities: it is recommended that the claim be reworded to read more smoothly, the suggested correction is "The flame retardant resin composition according to claim 21 which further comprises a fluoro olefin resin as an anti-drip agent". Appropriate correction is required.
5. **Claim 45** objected to because of the following informalities: it is recommended that the claim be reworded to read more smoothly, the suggested correction is "The flame retardant resin composition according to claim 37 which further comprises a fluoro olefin resin as an anti-drip agent". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. **Claim 17 and 24** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- **Claim 17** recites the limitation "said sulfonating agent". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.
- **Claim 24** recites the limitation "said sulfonating agent". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. **Claims 15-16, 18-23, 25-32, 34-39, and 41-45** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitayama et al (WO 2001/27201, please see US 6,827,882 for English language equivalent)**.

**Regarding claim 15**, Kitayama teaches a flame retarder to be contained in a resin composition to confer flame retardant properties on said resin composition (col. 3, lines 25-50) wherein:

Sulfonate groups are introduced into an aromatic polymer containing monomer units having aromatic skeletons in an amount between 10 and 100 % (col. 5, lines 15-35), said polymer having a weight average molecular weight ranging from 1,000 to 300,000 (col. 5, lines 59-64).

Kitayama does not explicitly teach the sulfur content of the polymer, however, as Kitayama teaches the molecular weight of the polymer and the degree of sulfonation (col. 5) as presently claimed, It is therefore inherent that the composition has the desired sulfur content since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Regarding claim 16**, Kitayama teaches that the aromatic polymer is polystyrene (col. 5, line 38).

**Regarding claims 18- 20**, this is a product-by-process claim; patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in Kitayama is the same as product as presently claimed, it is

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unpatentable even if the product was made by a different process. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claim 21**, Kitayama teaches a flame retardant resin composition to which flame retardant properties have been imparted by a flame retarder contained therein (col. 3, lines 25-50) wherein:

Sulfonate groups are introduced into an aromatic polymer containing monomer units having aromatic skeletons in an amount between 10 and 100 % (col. 5, lines 15-35), said polymer having a weight average molecular weight ranging from 1,000 to 300,000 (col. 5, lines 59-64).

Kitayama does not explicitly teach the sulfur content of the polymer, however, as Kitayama teaches the molecular weight of the polymer and the degree of sulfonation (col. 5) as presently claimed, It is therefore inherent that the composition has the desired sulfur content since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Regarding claim 22**, Kitayama teaches that the flame retarder is contained in an amount 0.01 and 5 wt % (col. 3, lines 25-52).

**Regarding claim 23**, Kitayama teaches that the aromatic polymer is polystyrene (col. 5, line 38).

**Regarding claims 25-26**, this is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in Kitayama is the same as product as presently claimed, it is

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unpatentable even if the product was made by a different process. In re Marosi, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claim 27**, Kitayama teaches that the flame retardant resin contains from 90 to 99.98 wt % of polycarbonate (col. 3, lines 25-55).

**Regarding claim 28**, this is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in Kitayama is the same as product as presently claimed, it is unpatentable even if the product was made by a different process. In re Marosi, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claim 29**, Kitayama teaches that fluoro-olefin resins can be added to the composition as anti-drip agents (col. 6, lines 1-12).

**Regarding claim 30**, Kitayama teaches a flame retarder to be contained in a resin composition to confer flame retardant properties on said resin composition (col. 3, lines 25-50), wherein sulfonate groups are introduced into an aromatic polymer containing monomer units having aromatic skeletons (such as polystyrene) in an amount between 10 and 100 % (col. 5, lines 15-35).

**Regarding claim 31**, Kitayama teaches that the aromatic polymer is polystyrene (col. 5, line 38).

**Regarding claim 32**, Kitayama teaches that said polymer having a weight average molecular weight ranging from 1,000 to 300,000 (col. 5, lines 59-64).

**Regarding claims 34-36**, this is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production.

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Since the product in Kitayama is the same as product as presently claimed, it is unpatentable even if the product was made by a different process. In re Marosi, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claim 37**, Kitayama teaches a flame retardant resin composition to which flame retardant properties have been imparted by a flame retarder contained therein (col. 3, lines 25-50), wherein the flame retarder is an aromatic polymer is polystyrene (col. 5, line 38) wherein the sulfonate groups are added in the amount between 10 and 100 % (col. 5, lines 15-35).

**Regarding claim 38**, Kitayama teaches that the aromatic polymer is polystyrene (col. 5, line 38).

**Regarding claim 39**, Kitayama teaches that said polymer having a weight average molecular weight ranging from 1,000 to 300,000 (col. 5, lines 59-64).

**Regarding claims 41-42 and 44**, this is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in Kitayama is the same as product as presently claimed, it is unpatentable even if the product was made by a different process. In re Marosi, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claim 43**, Kitayama teaches that the flame retardant resin contains from 90 to 99.98 wt % of polycarbonate (col. 3, lines 25-55).

**Regarding claim 45**, Kitayama teaches that fluoro-olefin resins can be added to the composition as anti-drip agents (col. 6, lines



11. **Claims 17, 24, 33 and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitayama et al (WO 2001/27201, please see US 6,827,882 for English language equivalent)** in view of **Yates et al (EP 0 213 466)**.

The discussion regarding Kitayama in paragraph 11 above is incorporated here by reference.

**Regarding claims 17, 24, 33 and 40**, although Kitayama teaches that the sulfonated polymer is an aromatic compound (usually a styrenic-based polymer), Kitayama fails to teach an aromatic resin where the aromatic skeleton is in the main part of the chain.

Yates teaches a polycarbonate compound which has been sulfonated and is used as a flame retardant for polycarbonate resins (page 11, lines 3-14).

It would have been obvious to a person of ordinary skill in the art to use the sulfonated polycarbonate as taught by Yates as the flame retardant sulfonated aromatic resin in the composition of Kitayama. Case law holds that the selection of a known material based on its suitability for its intended use supports prima facie obviousness. *Sinclair & Carroll Co vs. Interchemical Corp.*, 325 US 327, 65 USPQ 297 (1045).

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doris L. Lee whose telephone number is (571)270-3872. The examiner can normally be reached on Monday - Thursday 7:30 am to 5 pm and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Doris L Lee/  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796